

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method comprising:

providing a test request for reading or processing signal data from a sub-array of probes on a the chemical array, wherein the test request references a type of test to be performed;

retrieving an instruction from a plurality of instructions stored in a memory, wherein different instructions for reading or processing signal data from the chemical array, corresponding to different test requests are stored in the memory, each instruction retrievable with a different test request, based on the test request provided and wherein at least two of said instructions instruct processing or reading a sub-array pattern, different from the other, from the same chemical array, and wherein any sub-array pattern, whether comprising a continuous set of features or a non-continuous set of features is instructable; and

reading or processing the signal data, for the sub-array instructed by the retrieved instruction;

and

outputting results from said reading or processing for use by a user.

Claims 2 - 4. (Canceled)

5. (Previously Presented) A method according to claim 1, additionally comprising repeating the providing, retrieving, and reading or processing one or more times with respect to the chemical array, each time with a different test request, and wherein the retrieving comprises retrieving different instructions in at least one repetition, and reading or processing signal data from a different sub-array in at least one of the repetitions.

6. (Currently Amended) A method according to claim 1 wherein at least one of said instructions comprises an instruction for processing signal data from the a sub-array of the chemical array identified by a sub-array pattern provided by the instruction.

7. (Previously Presented) A method according to claim 6 wherein at least one of said instructions comprises an indication that only signal data from feature locations in the sub-array need be read or processed.

Claims 8 - 9. (Canceled)

10. (Previously Presented) A method according to claim 6 wherein the sub-array pattern is received from a memory which carries multiple sub-array patterns for the chemical array, each said sub-array pattern being retrievable with a different test request.

11. (Previously Presented) A method according to claim 10 wherein said processing the signal data comprises processing only signal data from features within the received sub-array pattern, as applied to the chemical array.

12. (Currently Amended) A method according to claim 10, further comprising transmitting results from acquired signal data from only from those array feature locations within the received sub-array pattern, wherein those array feature locations are identified by applying the received sub-array pattern as applied to the chemical array.

13. (Previously Presented) A method according to claim 12 wherein the results do not provide any indication of which feature locations of the chemical array are bound to a sample component.

Claims 14 - 40. (Canceled)

41. (Previously Presented) The method of claim 1, further comprising providing an array identifier, said array identifier identifying the chemical array, and wherein said retrieving an instruction is performed based on said test request and said array identifier.

42. (Previously Presented) The method of claim 1, further comprising providing account information in addition to said providing a test request.

43. (Previously Presented) The method of claim 42, further comprising charging an account according to said account information provided, for a test requested by said test request having been provided.

44. (Previously Presented) The method of claim 1, further comprising transmitting results of

said processing to a user at a remote location.

45. (Previously Presented) The method of claim 1, wherein the at least one instruction comprises an indication that only signal data from feature locations in the sub-array need be read or processed.

46. (Previously Presented) The method of claim 42, additionally comprising providing to a requestor of the test a price for the test requested.

47. (Previously Presented) The method of claim 1, wherein at least one instruction comprises an instruction on processing read signal data.

48. (Previously Presented) The method of claim 1, wherein at least one instruction comprises a data processing instruction or a parameter for a method which performs array signal data interpretation.

49. (Previously Presented) The method of claim 1, wherein said signal data is obtained from labeled target molecules bound to one or more probes on the chemical array.

50. (Previously Presented) The method of claim 1, further comprising providing a unique array identifier for the chemical array with said test request, wherein said different instructions for reading or processing signal data from the chemical array are each linked with a different test request and are all linked to the unique array identifier.

51. (Previously Presented) The method of claim 1, wherein said reading or processing are carried out at a first location, said test request is transmitted to a second location remote from said first location, and the instruction is retrieved at said second location and transmitted to said first location.

52. (Previously Presented) The method of claim 1, wherein signal data from the chemical array and said test request are transmitted from a first location to a second location remote from said first location, and wherein said reading or processing the signal data comprises processing the signal data at said second location.

53. (Previously Presented) The method of claim 43, wherein said reading or processing are carried out at a first location, and said test request and account information are transmitted to a second location remote from said first location.

54. (Previously Presented) The method of claim 43, wherein signal data from the chemical array and said test request and account information are transmitted from a first location to a second location remote from said first location, and wherein said reading or processing the signal data comprises processing the signal data at said second location.

55. (Previously Presented) The method of claim 1, wherein said test request is transmitted from a first location to a second location remote from said first location, said method further comprising transmitting a quoted price for the test requested, from said second location to said first location.

56. (New) The method of claim 1, wherein said outputting comprises presenting said read or processed data on a display for viewing by a human user.

57. (New) The method of claim 1, wherein said test request is selected from the group of test requests consisting of: tests for expression levels of one or more genes or a class of genes; tests for gene polymorphisms, tests for copy numbers of one or more genes or a class of genes; tests for the presence of a pathogen; and tests for a disease condition of an organism from which a sample exposed to the chemical array was derived; testing a sample to ascertain whether it contains one or more predefined components, either quantitatively or qualitatively.

58. (New) The method of claim 1, wherein said result indicates whether a sample that was exposed to the chemical array likely does or does not exhibit a particular condition selected from the group consisting of: a disease, presence of a pathogen and a particular genetic deficiency.

59. (New) A method comprising:

providing a test request for reading signal data from a sub-array of probes on a chemical array, wherein the test request references a type of test to be performed;

retrieving an instruction from a plurality of instructions stored in a memory, wherein different instructions for reading signal data from the chemical array, corresponding to different test requests are

stored in the memory, each instruction retrievable with a different test request, based on the test request provided and wherein at least two of said instructions instruct processing or reading a sub-array pattern, different from the other, from the same chemical array;

reading the signal data, for the sub-array instructed by the retrieved instruction; and  
outputting results from said reading for use by a user.

60. (New) A method comprising:

providing a test request for reading or processing a sub-array of probes on a chemical array,  
wherein the test request references a type of test to be performed;

retrieving an instruction from a plurality of instructions stored in a memory, wherein different instructions for reading or processing signal data from the chemical array, corresponding to different test requests are stored in the memory, each instruction retrievable with a different test request, based on the test request provided and wherein at least two of said instructions instruct processing or reading a sub-array pattern, different from the other, from the same chemical array;

reading signal data, for the sub-array instructed by the retrieved instruction or exposing the sub-array to a sample; and

outputting results from said reading for use by a user or providing the exposed array.